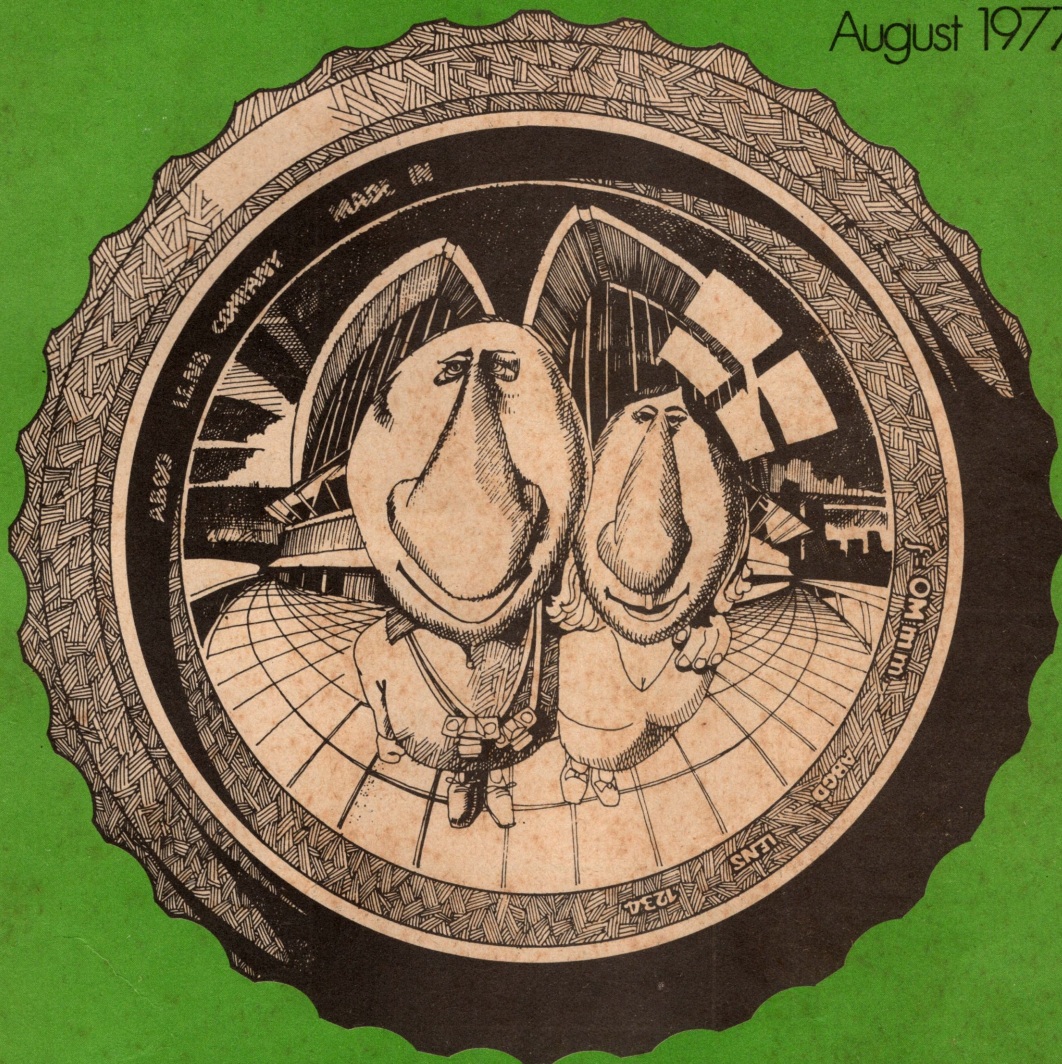


CHOICE

August 1977



SLR cameras
Electronic digital watches
"Comprehensive" car insurance

product safety

A Product Safety Committee was established by the former State Government in New South Wales in May, 1976. Since then the Committee has worked to secure the removal from sale in New South Wales of products considered to be dangerous. Other States have plans to set up similar bodies; a Committee exists in Western Australia which at the moment has no legislative power to ban products, while in South Australia and Tasmania legislation is being drafted to set up similar committees with legislative power to ban the sale of specific goods. However, New South Wales is, at the moment, the only State which has a Product Safety Committee with power to recommend that dangerous goods be removed from the market place.

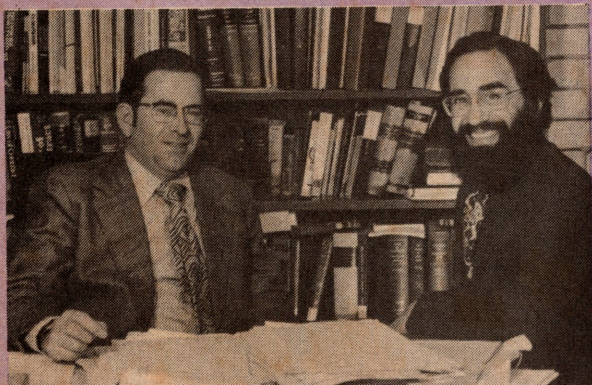
The Trade Practices Act provides for the making of regulations to prescribe safety and information standards applying to consumer products, and early this year a joint Commonwealth/State Committee was established to advise the Commonwealth Government in respect of consumer product standards. So far only one standard, relating to buoyancy aids used by children when swimming, has been issued, but other standards are in various stages of preparation.

Recent amendments to the Trade Practices Act which came into force on 1st July, 1977, empower the Minister for Business and Consumer Affairs, by notice published in the Gazette, to prohibit for up to 18 months the supply by a corporation of specified goods. ACA welcomes these amendments, which could have far reaching effects on product safety and result in standardization which will overcome the problems inherent in each State introducing separate regulations.

However, ACA believes that, without established facilities for research and testing, the protection afforded to consumers by this amendment could be more apparent than real. Dangerous goods will usually only come to the attention of the Minister when they are already on sale and have killed or injured someone. In order to make this power preventative rather than corrective, the Minister could either employ the resources of already-existing government laboratories or establish a separate testing authority.

Even as a corrective, the Minister's powers are seriously deficient because they do not empower him to recall defective goods, but only to ban them from sale.

Implemented in the right way, we believe that the use of Commonwealth power under the Trade Practices Act in establishing a Commonwealth Product Safety Committee, with adequate State and consumer representation, is preferable to the establishment of Product Safety Committees in each State, as that would result in the uniformity which is desirable – indeed necessary – to prevent goods which have been removed from sale in one State being off-loaded on consumers in another where legislative provisions have not yet been introduced.



Professor D.J. Harland

Mr O.D. Sperling

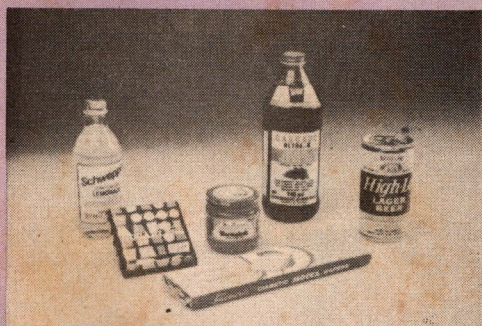
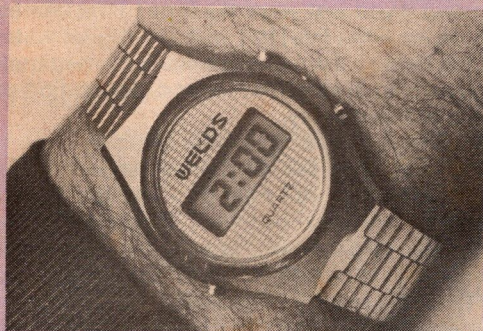
Professor David Harland has been appointed Chairman, and Mr Owen Sperling a member, of the Federal Government's Consumer Affairs Advisory Council. Professor Harland is a Council Member and Mr Sperling, Deputy Chairman of the Council of ACA.

The Consumer Affairs Advisory Council is to advise the Government Minister for Business and Consumer Affairs, Mr Wal Fife, on all matters relating to Federal responsibilities in consumer affairs. Its ten members were chosen to represent private consumer interests, retailers, manufacturers, and the advertising industry, with one representative from the Department of Business and Consumer Affairs.

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THE AUSTRALIAN CONSUMERS' ASSOCIATION
Council Member of the
International Organization of Consumers' Unions



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See back page for additional information

Electronic digital watches

They've burst upon the scene in the past few years and, as with pocket calculators, we've watched the prices tumble from hundreds to tens of dollars. You can still buy very expensive digital watches, but the cheaper ones are the more popular, and as the prices continue to fall we can expect to see more and more people buying them. In 1974, more than half of the watches sold in the United States of America were digital types.

Most digital watches differ from conventional ones in two ways: in maintaining a higher accuracy over a period – within a few seconds a week in many cases – and in the numerical display of time. It is doubtful whether people in everyday life need to know the time to better than a minute or so; but the higher accuracy is an advantage in making it unnecessary to re-set the watch frequently.

The digital display is a mixed blessing. It makes it very easy to read the time accurately to the second if you need it but to know whether it is "about ten past" or "about twenty past" you have to inspect

and comprehend the figures, instead of just glancing at the approximate position of the minute hand of a conventional watch – and, even though you may not need it, you get the time to the nearest minute or second. With a digital watch you need a little more skill at mental arithmetic.

In a conventional watch you can ignore the sweep second hand if you just want the time to the nearest one minute (or even five) but with the digital watch you get the time to the nearest minute immediately and frequently to the nearest second, depending on the details of the display.

A conventional analog watch enables you to obtain the time with the amount of accuracy you need; a digital watch can only give you the time to the degree of precision of which it is capable. For ordinary personal purposes, then, it is questionable whether a digital watch is necessarily the best choice. Their popularity is growing, however, and we have assessed a range of low priced electronic digital watches.



The market

When we surveyed the market we found a large range of electronic digital watches – 45 brands priced from \$19.95 to \$345.00. We expect market prices to fall as a result of more competition and a growing acceptance by the public.

Because of this we decided to restrict our purchases to the cheapest available in each brand and priced below \$60. The 10 brands we purchased and received are shown in Table 1. The brand we purchased and didn't receive is discussed on page 274.

Brand X?

Only a limited number of manufacturers in the world make the integrated circuit chips which translate the quartz oscillations into the digital display. Clearly the guts of several of the watches are the same, with differences of styling only in the case and watchband. With some watches we had difficulty discriminating the brand name used for the watch at the time of sale from the brand on the instructions or the watch. For this reason we have listed possible alternative names in Table 1.

We purchased a watch from Woolworths in the belief that its brand was Woolworths house brand CHEVRON. However, the box and instructions, were marked QUARTZ, which could have been either a brand or a description. We contacted Woolworths head office and were told that they considered the watch to be unbranded.

We had a similar problem with a watch purchased from K-Mart. Again the watch's instructions contained only the word QUARTZ; when we contacted K-Mart they told us that the brand of the watch was SONORA.

A rose by any other name may smell as sweet, but a watch by any other brand may be the same or different.

Functions

Digital watches can best be judged on the number of functions they offer.

The simplest (and usually the cheapest) show only hours, minutes and seconds readout. Other common functions which are available in more expensive watches are month, day and date and stopwatch action. Cheaper watches usually show only numbers and flashing dots. Other watches will give alphabetic readouts of one of more letters for the month and day.

In Table 1 we have shown which functions were found on the watches we tested.

How do they work?

Electronic digital watches on the market at present typically use a quartz crystal which oscillates at a frequency between 32kHz and 3MHz. The quartz crystal is induced into resonant oscillation by application of a small voltage and the high frequency of pulses originating from the crystal is broken down electronically to pulses which count seconds, minutes and hours. Quartz crystals are chosen as they can be cut in such a way as to be little affected by temperature changes near normal body and room temperatures. It is because of this stability in the frequency of oscillation that these watches can claim an inherent accuracy of a few seconds a week.

Display

The output from a crystal can be displayed in two ways, either as an analog display (the traditional dial with sweep hands) or as a digital display. There are two types of digital display, those utilising light emitting diodes (LEDs) and those utilising liquid crystals (LCDs). By far the most common are the LEDs.

The actual timekeeping circuits draw very little current; the main limitation on battery life is the current drawn by the display. LEDs draw far more than LCDs and so LED display watches are equipped with switches to turn the display on when you want to know the time. The timekeeping circuits run continuously until the battery runs down. LCD watches have the advantage of a continuously visible display.

LED, as their name implies, generate their own light and are easier to read in dim or dark conditions. In a bright light they tend to look washed out and are hard to read. LCDs rely on reflecting available light to provide a dark display on a bright background. They are less easy to read in dim conditions, but become easier to read the brighter the available light. Some manufacturers have tried to get around this limitation by incorporating tiny lights inside the case (WELDS has one), but these draw a lot of current compared with the display and so they must be switched on and off in the same way as LED displays. In the near future technological advances may well remove present limitations of both types of display.

ACA's tests

We assessed the ease of use of the watches, their display types, timekeeping accuracy and battery life and replacement cost.

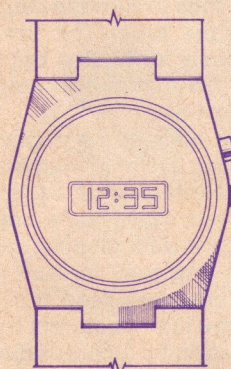
TABLE 1

Brand	Also known as (model)	Price paid (\$)	Origin	Display type*	Functions**
CHEVRON	Quartz, Siren	29.95	Hong Kong	LED	Dy,Dt,H,m,s
EXELAR	National Semiconductor (EA1-YS)	19.95	Singapore	LED	H,m,s
GENERAL ELECTRIC	(DW125)	49.95	not stated	LED	Dy,Dt,H,m,s
MICRONTA	Tandy (63-5002)	49.95	Hong Kong	LED	M,Dy,Dt,H,m,s
QUALITRON	(MA-23S)	29.00	not stated	LED	H,m,s
SABRE	(3852)	39.95	not stated	LED	Dy,Dt,H,m,s
SONORA	Quartz (3606)	39.98	Hong Kong	LED	Dy,Dt,H,m,s
TIMEBAND	Fairchild (231)	31.86	not stated	LED	M,Dt,H,m,s
TRADITION	Gala, Waltons, Stellaris	49.95	Hong Kong	LED	M,Dt,H,m,s,
WELDS	—	59.93	Taiwan	LCD	M,Dt,H,m,s,St

*LED = Light Emitting Diode, LCD = Liquid Crystal Display
 **M = Month, Dy = Day, Dt = Date, H = Hours, m = Minutes, s = Seconds, St = Stopwatch

Control functions on the watches tested

Watches with light emitting diode (LED) displays



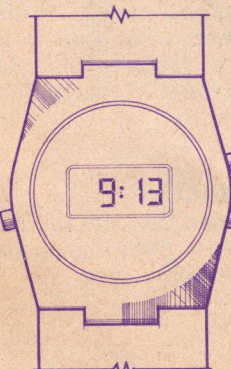
FUNCTION SWITCH

Display normally off; to see hours and minutes press button, hold to see seconds, press again to see day or date and month (except on EXELAR and QUALITRON).

SETTING SWITCH (recessed)

A pointed object, like a ballpoint pen, is used to set the watch to the correct time.

Watch with liquid crystal display (LCD)



LIGHT SWITCH

FUNCTION SWITCH

Display normally shows hours and minutes; press button to see month and date, press again to see seconds, press again to return to hours and minutes.

SETTING SWITCH (recessed)

Operates in same manner as on LED watch.

STOPWATCH SWITCH

Press button for zero, press again for run, press again for stop, press again for zero; press function switch to return to time.

Ease of use

The LED types with the switch-on display are not as easy to use as the continuous-display LCD type. With the LED display watches we tested you need to use your other hand to switch on the display and then it stays on for only about one second showing the hours and minutes. If the button is held depressed, the seconds flash up for as long as the button is held depressed. There are two models with different sequences. TIMEBAND displays hours and minutes for about two seconds if the button is just touched, but if the button is held down it displays hours and minutes until the button is released. It requires a further two pushes on the button to display seconds. TRADITION displays minutes and seconds if the button is held down; in our view this is much better than a flashing seconds display.

A second depression of the button gives the day and date, or month and date, depending on which functions are provided. MICRONTA switches from date and month to day after about two seconds. TIMEBAND displays seconds on the third depression of the button.

WELDS, the LCD watch returns to continuous display of hours and minutes on the third depression.

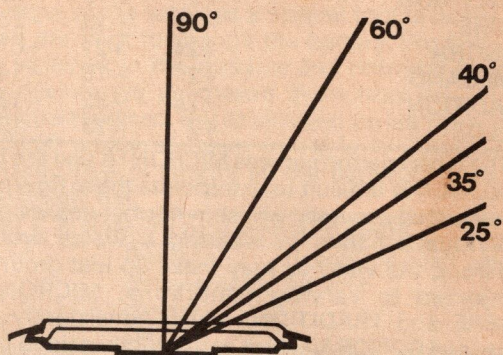
The button is positioned for wearing the watch on the left wrist; using it on the right is more awkward because you must reach across the face of the watch to press the button.

The WELDS with an LCD display was easier to read than any of the LED types. The LED types are particularly awkward to use when driving, carrying a parcel or doing other things in which one hand is occupied. With most it is more difficult to sneak a surreptitious look at the watch during boring social engagements. The display on WELDS and TIMEBAND was only visible within 30 degrees of full face (see Table 2).

Table 2 Viewing angle (the lower the better)

TIMEBAND, WELDS	60°
EXELAR, SABRE	40°
MICRONTA	35°
CHEVRON, GENERAL ELECTRIC, QUALITRON, SONORA, TRADITION	25°

We found that the LED displays were harder to read than the LCD display in all conditions except total darkness. In total darkness the LCD watch (WELDS) was quite readable when held at a certain angle and the button pressed to illuminate the display. In very bright conditions the LED displays become washed out. All the LEDs except GENERAL ELECTRIC and SABRE have dark red tinted glass which were noticeably easier to read under these conditions than those with pale red or clear glass (GENERAL ELECTRIC and SABRE).



Timekeeping accuracy

The timekeeping accuracy of all watches is dependent to a certain extent on the temperature of the watch. When worn, the temperature of a watch will not vary very widely due to constant body temperature. If, however, you take your watch off while sleeping, showering or playing sports, the watch's temperature could change quite markedly. We checked the accuracy of the watches over a ten day period at room temperature (around 20°C), and in controlled temperature enclosures for one week at -5°C and one week at 40°C. The results are shown in Table 3.

Far left: in WELDS the LCD reads time continuously (two o'clock exactly). Left: on pressing the top right button, WELDS gives month and date (July 6). Below: on pressing the lower right button, WELDS acts as a stopwatch (15 seconds). Right: SONORA displays day and date when the button is pressed for the second time.

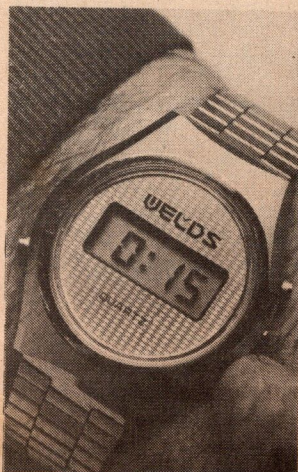
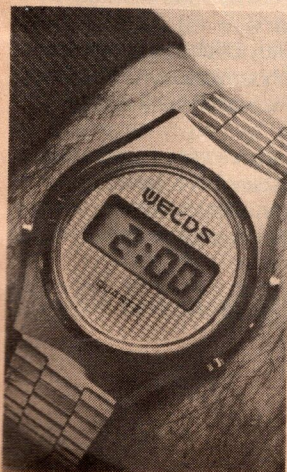


Table 3 Timekeeping accuracy at various temperatures

Brand	(Number of seconds gained or lost)		
	Room temp. (10 days)	-5°C (week)	40°C (week)
CHEVRON	+2	-26	-17
EXELAR	+5	-2	-2
GENERAL ELECTRIC	0	-2	-24
MICRONTA	-4	-85	-37
QUALITRON	+2	-19	-19
SABRE	-2	-18	-26
SONORA	+24	+21	+6
TIMEBAND	+2	-19	-14
TRADITION	-25	-32	-13
WELDS	+2	-13	-16

The worst performer was MICRONTA and the best EXELAR. It is difficult to extrapolate these figures to an expected accuracy whilst in normal use, as each individual's habits in wearing a watch will be different; the watches may make up lost ground if subjected to varying conditions. MICRONTA, SABRE and TRADITION, which consistently lost time, and SONORA, which consistently gained time, are unlikely to improve in overall accuracy from variations in wearing habits.

CHEVRON, SABRE and SONORA suggest in their instructions that the watch is capable of accuracy within five seconds a month, but hedge this a little by stating that the watch is guaranteed to within 20 seconds a month. GENERAL ELECTRIC also claims an accuracy of 20 seconds a month. TIMEBAND claims that the watch is capable of accuracy within one minute a year, but points out that gross temperature extremes or shock may change this. MICRONTA limits its accuracy claim to "far surpassing conventional watches." EXELAR, TRADITION and WELDS give no indication of expected accuracy.

Guarantee

The watches all had a guarantee covering materials and workmanship, except QUALITRON. The guarantee packed with QUALITRON covered only cameras and other photographic equipment and did not mention watches at all. Details of periods and exclusions are shown in Table 4.

Setting the time

To set the time on the digital watches we tested, you need a pointed object like a ballpoint pen. This is used to depress a recessed button in the side of the watch case. Depending on the number of depressions of this button, the display cycles through the numbers for each of the time divisions and when the correct time is displayed you release the button.

Table 4 Guarantees

CHEVRON, GENERAL ELECTRIC, SABRE, SONORA	One year, excluding water damage, bracelet, setting buttons, glass, batteries, damage to the case. Outside guarantee period, minimum service charge \$6.00.
EXELAR	Three months full warranty; next nine months service at a standard fee of U.S. \$5.00 for all repairs. Excludes batteries and bracelet.
MICRONTA	One year. Service fee outside warranty £6.
TIMEBAND	One year on electronic module and watch case only.
TRADITION WELDS	One year unconditional. One year from date of shipment. Excludes batteries, bracelet, case and crystal.

Instructions

The (almost identical) instructions packed with CHEVRON, GENERAL ELECTRIC, SABRE and SONORA were found to be easy to follow and quite comprehensive. They included instructions for changing the batteries if you want to do it yourself and save some money.

We found the EXELAR instructions to be incorrect on one point – the watch does not hold the seconds at 00 when the setting button is released; the seconds continue to advance and the minutes do not advance until the watch has cycled through the full 60 seconds. We found this an annoying feature. QUALITRON worked in the same way as EXELAR. Its instructions were more accurate, though not as detailed in other respects as those with EXELAR. EXELAR also has a battery saver though the use of this is not covered in the instructions. MICRONTA and WELDS had comprehensive instructions with which we had no difficulties.

TIMEBAND has good instructions except for a small matter of layout which makes synchronising the watch to the reference clock awkward unless you pick up the error.

TRADITION was supplied with a set of instructions for a normal watch. These have no bearing on a digital watch. We asked for another (correct) set but again received the same inappropriate instructions.

Features

Aside from the number of functions (see Table 1),

only five of the watches claimed other features; these are shown in Table 5. Warnings are shown in Table 6.

**Table 5
Features claimed**

EXELAR	Battery saver circuit
QUALITRON	Battery saver circuit, waterproof
TIMEBAND	Automatic calendar, shock resistant, scratch resistant lens
TRADITION	Shock resistant, water resistant, antimagnetic
WELDS	Internal display lamp, shock resistant, water proof, dust resistant, antimagnetic, four year calendar

**Table 6
Warnings**

CHEVRON, GENERAL ELECTRIC, SABRE, SONORA	Battery life is reduced with more than 20 uses per day. Wrong type of battery should not be fitted, not waterproof.
EXELAR	Don't change the battery yourself
QUALITRON	Battery saver circuit may be accidentally operated to turn watch off
TIMEBAND	Do not immerse in water or cleaning solution or expose to extremes of temperature; opening or unauthorised repair will void warranty, do not clean with strong chemicals
MICRONTA, TRADITION, WELDS	No warnings

Battery life

The probable battery life is very hard to estimate, as it depends on the number of times the various functions are used. With the LED watches the amount of current drawn is proportional to the number of segments in the display which are operated, so, for example, 11.11 will draw far less current than 8.56. EXELAR, TIMEBAND and TRADITION estimated the life of the batteries to be about one year with an average usage. MICRONTA suggests an expected life of six months, the others make no estimate.

We measured the average current drawn by the display while in the seconds mode. The highest current was drawn by EXELAR, followed by QUALITRON, the others (with the exception of WELDS) drawing about two-thirds the current drawn by EXELAR. WELDS with its LCD display

drew 3500 times less current than the lowest of the LED watches; the manufacturer suggests a battery life of 1½ years. Of the LED watches CHEVRON, GENERAL ELECTRIC, SABRE and SONORA explicitly warned that it was possible to flatten the batteries in a few weeks if the watch was used more than 20 times per day. We would like to stress the point that the more you use the display on an LED watch, the quicker you will use up the batteries.

Battery replacement

Some care is required in replacing the batteries, and on most of the watches a special tool is needed to open the back to change the battery. We flattened the batteries in the watches and returned them to the dealers we purchased them from to get the batteries replaced. Prices charged varied from \$2.16 to \$9.50 and are shown in Table 7. WELDS was replaced free of charge as the batteries were not completely flat.

TABLE 7 Battery replacement costs

Brand	Dealer's replacement charge (\$)	Recommended battery type***
CHEVRON	6.00	standard silver oxide
EXELAR	3.00	RAYOVAC RW22 or 42 EVEREADY 357, MALLORY 10L14
GENERAL ELECTRIC	8.00	standard silver oxide
MICRONTA	6.00	UNION CARBIDE 386 RAY-O-VAC RW44 MALLORY 10L124
QUALITRON	3.00*	RAY-O-VAC RW22, EVEREADY 357
SABRE	9.50	Standard silver oxide
SONORA	4.00	Standard silver oxide
TIMEBAND	4.00	RAY-O-VAC RW44, EVEREADY 386 MALLORY 10L124, MATUSHITA WL-11
TRADITION	2.16	No recommendation
WELDS	0.00**	RAY-O-VAC RW44

*batteries supplied, we installed them.

**batteries not completely flat, exchanged free of charge.

***Manufacturers' prices as quoted to ACA
EVEREADY 386 \$2.60 each 357 \$2.60 each
MALLORY 10L124 \$3.19 (2) 10L14 \$2.36 (2)
RAY-O-VAC RW44 \$2.60 each RW42 & 22 (same) \$2.60 each
MATUSHITA no information available.

All the watches use two standard 1.5V watch type batteries. Clearly you could save yourself a good deal of money by purchasing one of the watches with provision for you to change the batteries yourself.

The watches which have instructions telling you how to change the batteries yourself are CHEVRON, GENERAL ELECTRIC, SABRE and SONORA.

Conclusions

We believe that digital watches are an acquired taste. In most ways they are less convenient to use than conventional watches. What you get for your money is a promise of higher accuracy than you probably need. Without doubt prices will fall and the number of functions you get for your money will rise in future generations of digital watches. In this they are remarkably akin to pocket calculators.

We found the LED display types to be more of a bother to use than the LCD type, which does not need a button to be pushed to see the time, although you do need to push buttons to see the day, date, seconds and stopwatch functions much as you do with the LEDs. The LCD watch (WELDS) also has the advantage of a longer life expectancy from the batteries, and consequently lower running costs. It is also easier to use on the right wrist.

With current high labour charges, if anything goes wrong with your digital watch outside the guarantee period it may well be cheaper to throw the watch away and buy another.

We suggest that a watch with a day and date function will be of more use than one with a date and month function. Equally, we liked TRADITION which displays minutes and seconds together, unlike any of the others. If accuracy is important we found the EXELAR was the most accurate of the watches tested. EXELAR was also the cheapest to purchase but, along with QUALITRON, had only three functions – hours, minutes and seconds. EXELAR also had an error in the instructions which made setting the watch difficult.

If you want to save money by replacing batteries yourself then consider CHEVRON, GENERAL ELECTRIC, SABRE or SONORA which give instructions on how to do it yourself.

For convenience, low running cost and maximum features we recommend WELDS, the most expensive of the watches we tested. If you want a cheap digital watch which just does the basics and you can accept its limitations, go for the EXELAR.

But, better still, wait a while before purchasing a digital watch at all. Prices are likely to continue to fall and you may well get a LCD digital watch for a lower price than we paid for the WELDS.

Recommended

(with some philosophical reservations)

WELDS (LCD)	\$59.93	(most expensive tested, has most functions)
EXELAR (LED)	\$19.95	(least expensive tested, least functions but most accurate)

Pre-publication check

We found EXELAR at the same price, but the distributor advised us that the model we tested was being discontinued. WELDS was available at the slightly reduced price of \$59.00. Distributors said that model changes in this market are frequent at present, and that there is a trend towards the LCD type of display because it gives longer battery life.

Distributors

CHEVRON	Woolworths Ltd
EXELAR	N.S. Distributors Pty Ltd, 2 William Road, Brookvale, 2100
GENERAL ELECTRIC	Australian General Electric (Appliances) Pty Ltd
MICRONTA	Tandy Corporation
QUALITRON	Photimport (Australia) Pty Ltd,
SABRE, SONORA	Grahame Smith Distributors
	149 Castlereagh Street, Sydney
TIMEBAND	Fairchild Australia Pty Ltd
TRADITION	Waltons Ltd, Sydney
WELDS	Chan Merchandising, 906 Casson Avenue, Mount Hutton, 2290

The one which never came

We have frequently warned our subscribers in the past to beware of mail order purchases. It is with some trepidation that we occasionally set out to follow typical buying habits and make mail order purchases for our tests.

In this test we attempted to purchase three watches advertised for mail order in national circulation magazines and newspapers. One, QUALITRON, arrived in good order and time; the second, PANTER, was out of stock and our cheque was returned; the third, CENTIA, never arrived. We have pursued the case with some vigour with the promoters concerned, The House of Stuart trading from Perth. They assure us that the watch was duly sent. We have not received it.

In any mail order transaction the consumer who parts with his money some considerable time before seeing or receiving his goods is taking a risk. When the goods don't arrive the consumer has little redress with the dealer who maintains that the goods were sent.

If you must purchase by mail order, insist on registered mail for the delivery of the goods. We strongly suggest you do not order goods for delivery by mail under any other circumstances.

Special dietary foods

For medical reasons, some people can't eat certain foods such as chocolate and biscuits that most of us feel free to indulge in. For diabetics and over-weight people especially, diet is a serious matter, with risks to their health if they persistently break their diet.

Although people on special diets can still eat a wide range of "normal" foods, an industry has grown up offering the type of food they would not normally be able to eat. These foods are similar to normal foods but the carbohydrate content has been modified in some way by using a low energy (low calorie) substitute, a different type of carbohydrate or merely leaving the sugar out altogether.

These special dietary foods are made for two main purposes – for weight reduction by reducing the kilojoule (Calorie) intake, and for diabetics. **Low joule foods** (low calorie foods) have no sweetening, or else they have artificial sweeteners added such as cyclamates or saccharin. **Special dietary foods with modified carbohydrate** are made for diabetics where their kilojoule intake can be normal, but normal sugars cannot be eaten. These foods may contain sweetening agents such as sorbitol, mannitol and glycerol. Sorbitol and glycerol have energy available since they are quite well absorbed when eaten, although they do not depend on insulin for their metabolism. Mannitol is not absorbed, and therefore it will not contribute kilojoules; it can however cause diarrhoea when eaten in a substantial amount. There are other types of special dietary foods such as **low sodium foods** and **gluten free foods** which are for very specialised purposes.

What many people don't realise is that what one person on a special diet can eat, another can't. An overweight person may have to count kilojoules while a diabetic may have to watch the type of carbohydrate eaten. Even from one diabetic to another, diet may differ. That's why legislation in some States prohibits the use of wording on these foods which claim that they are suitable for people with certain

Diets go metric

The National Health and Medical Research Council has adopted the recommendation of its Food Standards Committee that, wherever the word 'Calorie' is used, it be replaced by its metric equivalent, 'Kilojoule'. There are approximately four kilojoules to every calorie. Although all States have not yet legislated for this change, on advice from the Metric Conversion Board we have used the expression kilojoule for calorie, energy value for calorific value, and low joule food for low calorie food.

conditions such as diabetes. You should always read the label and make sure the contents of the food are suitable to your diet.

It is not ACA's role to offer medical advice. However, we are concerned about the lack of uniformity in Australia regarding labelling of special dietary foods. The National Health and Medical Research Council is in the process of revising the Standard for Special Dietary Foods, and we are pressing for this to be adopted by all States on its completion. We are also concerned about common misconceptions of the value of such foods in the control of weight and the stabilization of diabetes.

Some special dietary foods examined

We purchased a selection of foods promoted as "low calorie", "special dietary food", "suitable for diabetics" or "diabetic". These were marmalade, wafer biscuits, chocolate, lemonade, blackcurrant fruit juice and beer. For comparison of their relative energy (calorific) value and carbohydrate content, we bought a similar range of foods which did not claim to be special dietary foods. The Table shows each special diet food and its normal diet equivalent, the manufacturer, and the price paid per 100 grams or millilitres.

What we found

Value for money

Half of the special dietary foods we bought were at least twice as expensive per unit of quantity as their "normal" counterparts. Only SCHWEPES Low Calorie Lemonade, MILLERS Hi-Lo Lager and CASCADE Ultra-C Low Calorie Blackcurrant Fruit Juice Syrup were the same price per millilitre as their normal-diet equivalent. ALEXANDER'S Milk Sugarless Chocolate was nearly three times as expensive per gram as CADBURY'S Dairy Milk Chocolate. MRS TREWREN'S Carbohydrate Modified Marmalade and FAVOURITE Diabetic Mocca Wafers cost more

than twice as much per gram as their normal-diet equivalents.

Not only are most special dietary foods more expensive than the normal type, but the quantities in the package are usually smaller. A smaller quantity may be practical if only one person in a family eats a special-diet food, but it also tends to conceal from the purchaser the fact that he is being charged a very high price per unit quantity.

Carbohydrate content

We analysed the carbohydrate content of the special dietary foods and compared them with the stated content on the package, and with the measured content of equivalent non-diet foods.

FAVOURITE Diabetic Mocca Wafers contained nearly twice the amount of carbohydrate stated on the label; ALEXANDER'S Milk Sugarless Chocolate contained fifty per cent more than was stated. We consider such misleading claims to be unethical, especially when the food is sold as being suitable for diabetics, for whom there is such a delicate balance between carbohydrate intake and blood sugar levels.

Most of the special dietary foods had a much lower carbohydrate content than the normal foods (see the Table), but with FAVOURITE Diabetic Mocca Wafers the amount of carbohydrate you're getting is not significantly different from the carbohydrate content of ARNOTT'S Triple Wafer Biscuits.

Energy (calorific) value

The energy value of special-diet foods was similar to what the manufacturers claimed, but there was not much difference between the energy value of most of the special-diet foods and that of their normal diet equivalents. Most had a slightly lower energy value than the normal foods; but ALEXANDER'S Milk Sugarless Chocolate and FAVOURITE Diabetic Mocca Wafers had a slightly higher value (see the Table).

Sweetening agents

Sweetening agents such as sorbitol are permitted in low joule and carbohydrate modified foods. However, this sweetening agent is not kilojoule-free; one gram of sorbitol contains 16 kilojoules (four Calories). Some of the foods we bought were stated to contain substantial amounts of sorbitol - 54 per cent in MRS TREWREN'S Carbohydrate Modified Marmalade and 42 per cent in ALEXANDER'S Milk Sugarless Chocolate. Because most of the sorbitol is absorbed, foods containing sorbitol can be very fattening unless taken in strict moderation. The Table gives the energy value of sorbitol present in 100 grams of the food.

Labelling

In some States, including New South Wales, it is prohibited to label foods as being suitable for people with a particular condition, as even people



By claiming to be suitable for diabetics, FAVOURITE Diabetic Mocca Wafers and SCHWEPES Low Calorie Lemonade, which we bought in New South Wales, are in breach of the labelling requirements of the New South Wales Pure Food Act. Because of an inconsistency in the amended regulations in New South Wales, ALEXANDER'S Milk Sugarless Chocolate can still be labelled as being suitable for diabetics, although (for reasons given in the text) we think it shouldn't be.

suffering from the same condition such as diabetes may have different dietary needs, depending on their age, fitness, occupation and so on. However, just among the sample of foods we bought in Sydney, we found three products claiming to be suitable for diabetics - ALEXANDER'S Milk Sugarless Chocolate, FAVOURITE Diabetic Mocca Wafers and SCHWEPES Low Calorie Lemonade. In New South Wales, there is an inconsistency in the Regulations such that ALEXANDER'S Milk Sugarless Chocolate can still be labelled as being suitable for diabetics. We think this inconsistency should be remedied immediately, especially as ALEXANDER'S claims to be sugar free. Its claims are quite misleading to the consumer who may be unaware that one gram of sorbitol contains 16 kilojoules, especially as the sorbitol content of ALEXANDER'S Milk Sugarless Chocolate is so high.

TABLE: Analysis of special dietary food and their normal diet equivalents

Brand	Manufacturer	Stated carbohydrate content (per cent)	Measured carbohydrate excluding sorbitol (per cent)	Stated energy value* (kJ/g)	Measured energy value* (kJ/g)	Energy value of sorbitol present in 100 grams of food (kJ/100 g)	Type of sweetener	Energy value of sorbitol present in 100 grams of food (kJ/100 g)
⊖ ALEXANDER'S Milk Sugarless Chocolate	S. Alexander Pty Ltd	81	6.4	9.6	23.1	26.4	sorbitol	700
CADBURY'S Dairy Milk Chocolate	Cadbury Confectionery	28	not stated	42.2	not stated	23.9	not stated	—
⊖ MRS TREWREN'S Carbohydrate Modified Marmalade	Trewren Products	25	6.9	1.5	10.5	9.2	sorbitol	900
MRS TREWREN'S Sweet Orange Marmalade		10	not stated	57.9	not stated	9.6	not stated	—
⊖ FAVOURITE Diabetic Mocca Wafers	Favourite Sweets	56	21.0	41.9	22.4	23.4	sorbitol	470
ARNOTT'S Triple Wafer Biscuits	Arnotts Famous Biscuits	26	not stated	53.9	not stated	21.8	sugar	—
⊖ SCHWEPPE'S Low Calorie Lemonade	Cadbury Schweppes Pty Ltd	6	0.3	not detected	0.05	not detected	cyclamate, saccharin	—
SCHWEPPE'S Lemonade		6	not stated	9.4	not stated	1.7	not stated	—
⊖ MILLERS Hi-Lo Lager	Toohey's Ltd	12	0.7	0.6	1.3	1.3	sugar	—
TOOTH'S KB Lager	Tooth and Co Ltd	12	not stated	2.0	not stated	1.3	not stated	—
⊖ CASCADE Ultra-C Low Calorie Blackcurrant Fruit Juice Syrup (bottled)	Cascade Cordials Pty Ltd	16	1.7†	0.76	0.3	0.13	cyclamate	—
CASCADE Ultra-C Black currant Fruit Juice Syrup (bottled)		16	not stated	45.9	not stated	1.7 †	not stated	—

* Converted to kilojoules where necessary.

⊖ special dietary food.

† Diluted according to instructions.

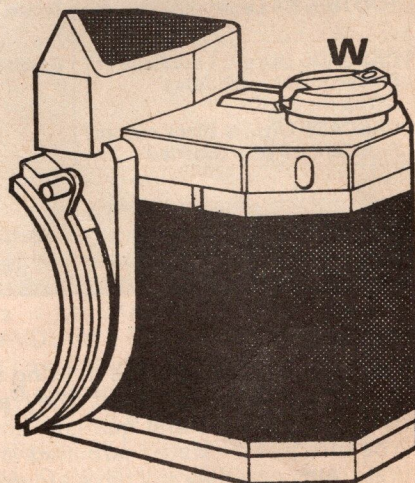
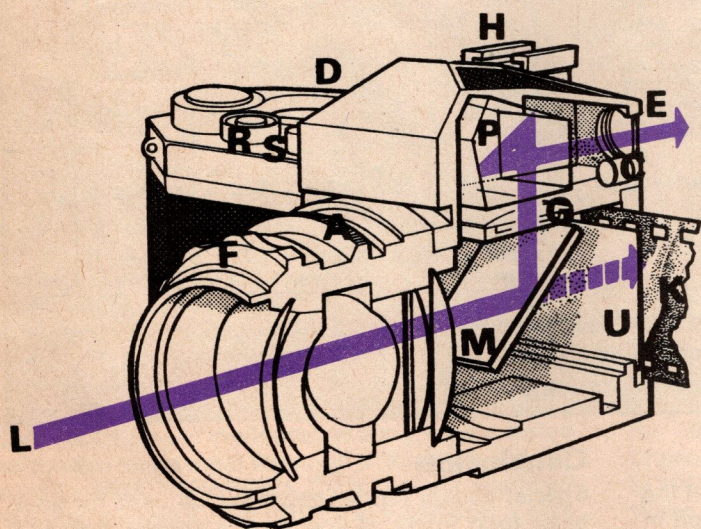
Summary

We can't see much advantage in using some of the special dietary foods we tested. They're a rip-off in terms of the price per unit quantity, and you can't even be sure that the stated carbohydrate content is accurate. Although they still have a lower carbohydrate content than the normal-diet equivalents, you get about the same kilojoule value. Only the special diet lemonade and fruit juice tested were significantly lower in kilojoule value than the normal equivalent, and thus may be of some help to people on special diets.

Conclusion

Special dietary foods should *not* be used for your basic food intake. If you're on a special diet, and even if you intend to use special dietary foods as an occasional treat, you should seek your doctor's or dietitian's advice before you try them. Especially for a diabetic, but for all people on special diets, it is better to go for the normal foods you can eat, rather than pay a lot of money for special dietary foods which will still have to be counted in your carbohydrate or kilojoule allowance.

Single lens reflex cameras



- | | |
|--------------------------|-------------------------|
| A aperture control ring | L light path |
| C photo-electric cell | M mirror |
| D film advance lever | P pentaprism |
| E eyepiece | R shutter release |
| F focus control ring | S shutter speed control |
| G focusing screen | U shutter blind |
| H hot shoe for flash gun | W rewind crank |
| K film | |

SLR Cameras

Eighteen single lens reflex (SLR) cameras were tested recently by the Consumers' Association of the United Kingdom and several European consumer organisations. All of these are available in Australia, apart from three which have been discontinued. This article is a reprint of the report that appeared in *WHICH?*, with additional information on the Australian prices of the models tested, and a list of other comparable cameras available here.

If all you want is to take holiday or family snaps, one of these cameras is probably not for you – unless you're fascinated by gadgetry, and don't baulk at paying for it. But if you're seriously into photography, you probably want a 35 mm camera. This can be more versatile and give better results than a 110 or 126 camera, and generally isn't as expensive as a 6 x 6 cm camera.

The cameras tested

The 18 cameras are listed on p 283. The Praktica was made in East Germany, the rest in Japan.

The cameras were tested with a standard lens between f1.7 and f2 – the most popular size. Larger lenses of f1.4 or f1.2 are available for most of the cameras, but they cost considerably more and are heavier.

How the cameras compared

All the cameras tested were capable of taking good pictures in most conditions. Where the cameras differed was in their ability to take good pictures under *difficult* conditions, and in how convenient and undemanding they were to use.

What's different about SLR cameras?

The Diagram shows how an SLR camera allows you to look at the scene you are photographing through the lens that's used to take the picture. A mirror inside the camera reflects the light up into the eyepiece through a five-sided prism (pentaprism) which turns the picture the right way round. When you press the shutter release, the mirror springs out of the way to let light reach the film.

35 mm SLR cameras are normally bulkier and heavier than 'compact' 35 mm cameras (which don't let you look through the lens). But they have some important points in their favour:

- **more accurate composing of shots**

What you see in the eyepiece should correspond closely with what will appear in the picture.

- **easy and accurate focusing** Instead of measuring or guessing the distance to your subject and setting this on your lens, you look through the eyepiece and turn the focus control ring until the picture is sharp.

- **interchangeable lenses** If you change the lens (to a wide-angle or telephoto lens, for example) you still

see in the eyepiece what will appear on the film.

- **through-the-lens metering** All the cameras tested had a light meter built in, which worked through the camera's lens. In this way, it measured only the light that would reach the film.

What you do to take a picture

Automatic cameras, where you set the aperture.

You start by setting the aperture. You then look through the eyepiece, point the camera at what you want to photograph, and turn the focus control ring to bring the picture into focus. There is a scale at the edge of the viewfinder which shows you the shutter speed that the camera has automatically selected, and on some cameras there's also a scale to show the aperture you have set. If there's too little or too much light for the aperture set, this fact is shown on the scale in the viewfinder. Assuming the light is OK, you simply squeeze the shutter release.

Automatic cameras, where you set the shutter speed.

With this type, you start by setting the shutter speed. Otherwise, the procedure is the same as above – except that it's the aperture (not the shutter speed) that the camera selects automatically.

Semi-automatic cameras. With this type, you normally start by setting the shutter speed, and then – looking through the viewfinder – adjust the aperture control ring until a pointer at the edge of the viewfinder is lined up with a marker. You can, of course, start the other way about, by first setting the aperture.

An **automatic camera** can save you some thought, and overcomes the problem of taking pictures in quick succession in changing light conditions. Which type you choose – the type where you set the aperture, or the shutter – is a matter of personal preference (skilled photographers tend to prefer the former).

A **semi-automatic camera** involves you in a little extra work.

Distributors

ASAHI PENTAX	C. R. Kennedy (Sales) Pty Ltd
CANON	Rank Industries Australia Pty Ltd
CHINON	Maxwell Photo-optics Pty Ltd
FUJICA	Camera Distributors Pty Ltd
KONICA	Rudolph Gunz (Photographics) Pty Ltd
MAMIYA	Maxwell Photo-optics Pty Ltd
MINOLTA	Photimport (Australia) Pty Ltd
MIRANDA	Wagner Photographics Pty Ltd
NIKKORMAT	Maxwell Photo-optics Pty Ltd
OLYMPUS	H. Levinson Pty Ltd
PETRI	Watson Vicor Ltd
PRAKTICA	Hanimex Pty Ltd
RICOH	Bell & Howell Australia Pty Ltd
YASHICA	Rank Industries Australia Pty Ltd

Viewfinders and focusing

To make it easier to focus accurately, each camera had a small section in the middle of its viewfinder, called a microprism. This makes the scene you're looking at break up, except when it's exactly in focus. Some cameras also had a split-image focusing spot in the centre – for explanation, see illustration. This is particularly useful for focusing in a poor light, or if you have less than perfect eyesight.

Many of the viewfinders included, at their outside edge, scales showing your settings for aperture, shutter speed, or both. With automatic models, it is particularly useful to be able to see what setting the camera has decided on.

Nearly all the viewfinders showed about 90 per cent of the area actually taken. This is intentional – to allow for the parts that may be masked in the printing or by the slide mount.



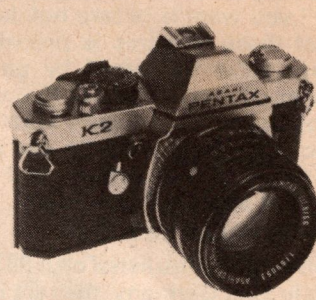
MINOLTA XE-1 (\$729)

Automatic (you set aperture). Many facilities, good performance, very convenient. But a lot of money.



NIKKORMAT EL (\$730)

Automatic (you set aperture). Quite a few facilities, good performance, fairly convenient. Excellent lens, but extra lenses expensive.



ASAHI PENTAX K2 (\$558)

Automatic (you set aperture). Many facilities, good performance, convenient.



CANON EF (\$671)

Automatic (you set shutter speed). Many facilities, very good performance, very convenient. Excellent lens.



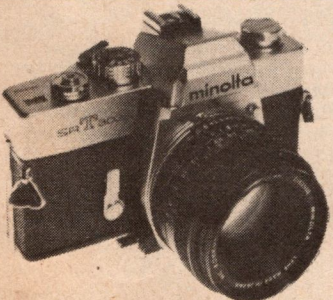
YASHICA Electro FX-1 (\$577)

Automatic (you set aperture). Quite a few facilities, fairly good performance, convenient.



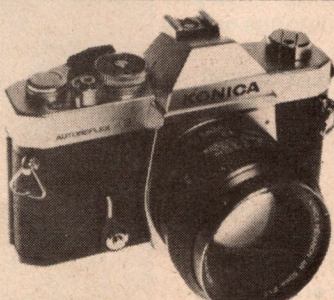
OLYMPUS OM-1 (\$507)

Semi-automatic. Few facilities, very good performance, not very convenient. Small and light.



MINOLTA SRT303b (\$538)

Semi-automatic. Quite a few facilities, fairly good performance, convenient.



KONICA Autoflex T3n

Automatic (you set shutter speed). Many facilities, good performance, convenient.



ASAHI PENTAX KX (\$399)

Semi-automatic. Quite a few facilities, good performance, convenient.

Note for people who wear glasses. There are problems in using the viewfinders, because the whole of the scene you're looking at and scales at the edge of the viewfinder cannot usually all be seen at once; and extra light can come through the eyepiece, which may upset the exposure setting. With most cameras, you can correct this by buying a special eyepiece lens, enabling you to use the camera without your glasses.

Faults

Around 40 films were put through each camera – some in cold dry conditions, some in hot damp conditions. There were no serious problems with any camera. But it would be a good idea to put a new camera through its paces as soon as you get it – don't wait until your holiday before discovering a fault.



NIKKORMAT FT2 (\$503)

Semi-automatic. Quite a few facilities, very good performance, fairly convenient. Excellent lens, but extra lenses expensive.



CHINON CEII Memotron (\$614)

Automatic (you set aperture). Many facilities, fair performance, fairly convenient.



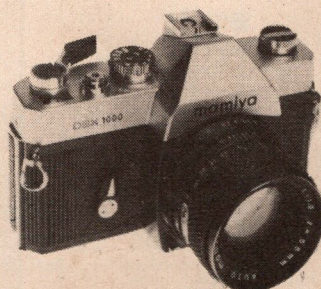
FUJICA ST801 (\$362)

Semi-automatic. Few facilities, fairly good performance, fairly convenient.



MIRANDA REII

Semi-automatic. Few facilities, rather poor performance, fairly convenient.



MAMIYA DSX1000 (\$385)

Semi-automatic. Few facilities, fair performance, fairly convenient.



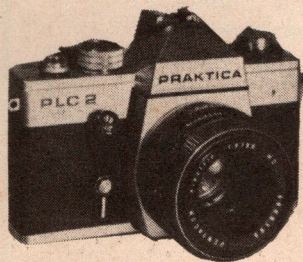
CANON TX

Semi-automatic. Very few facilities but very good performance, fairly convenient. Excellent lens.



PETRI TTL (\$280)

Semi-automatic. Very few facilities, fairly good performance, not very convenient.



PRAKTIKA PLC2

Semi-automatic. Few facilities, rather poor performance, not very convenient.



RICOH Singlex TLS (\$285)

Semi-automatic. Very few facilities, rather poor performance, not very convenient.

Prices*

Pay no attention to *list* or *recommended* retail prices. Prices in shops and in advertisements in photographic magazines vary – we give the lower range of prices applying in November 1976, which were quite easily found by shopping around.

With an SLR camera, buying the camera itself may be only the start. To give an idea of the sort of extra costs you might be in for, the Table shows – for each camera – the recommended retail price for a 28 mm wide-angle lens and 135 mm telephoto lens of the same brand. You may be able to buy cheaper alternatives, made by specialist lens manufacturers.

New developments

Since testing was started, several manufacturers have announced new SLR cameras which are smaller and lighter than the models tested – a trend that's likely to continue over the next few years. Another trend is towards cheaper automatic SLRs – made possible by greater use of electronics, and (sometimes) by cutting down on facilities.

Value-for-money verdicts

Automatic

Good value

ASAHI PENTAX K2	\$558
CANON EF	\$671
KONICA Autoflex T3n	

Good but pricey

MINOLTA XE-1	\$729
--------------	-------

Semi-automatic

ASAHI PENTAX KX	\$399
CANON TX	

* Because of the wide variation in discount prices from one Australian capital city to another and in country areas, we have listed the recommended retail prices above and in Table 1 as a more realistic means of comparison. In Table 4 we give typical store prices we found for the cameras tested, together with the equivalent prices in the United Kingdom. There is no established recommended retail price for KONICA. CANON TX has been discontinued.

key to type of lens fixing

- B = bayonet
- S = screw thread

key to light-metering features

- B = bottom weighted
- C = centre weighted
- BC = bottom and centre weighted, combined
- D = alternative spot metering at bottom centre
- e = exposure meter setting visible from outside the camera
- m = memory knob to hold setting (e.g., for taking pictures against the light)
- x = control to adjust exposure (as for m, or for special effects)

key to type of shutter

- H = horizontal movement – cloth
- V = vertical movement – metal

key to viewfinder facilities

- M = microprism focusing
- S = split-image focusing
- (S) = split-image focusing – optional
- a = indication of aperture
- s = indication of shutter speed
- v = interchangeable viewfinder

key to other facilities

- B = battery tester
- M = can be used with motor drive or transport
- S = self-timer, for setting off shutter after delay of around 10 seconds
- b = blind to cover eyepiece
- d = facility to make exact double exposures
- e = manually set reminder of film type
- f = film in camera is indicated automatically
- g = slot to hold film box top
- h = hot shoe contact for flash
- (h) = hot shoe optional extra
- l = lock for shutter release
- m = mirror can be locked up, for minimum vibration and fitting some special lenses
- r = ready-to-take indicator (shutter cocked)

footnotes

- (1) Recommended retail price with standard lens, chrome finish (where available) and case. All-black finish usually about \$35 extra
- (2) Discontinued but may still be in the shops
- (3) But see text.

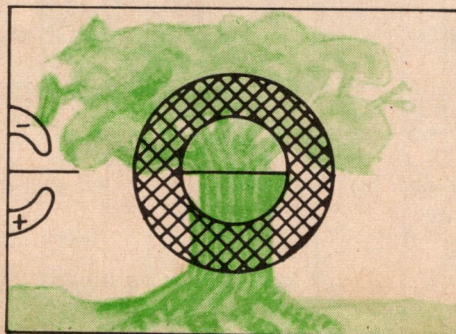
TABLE 1

TABLE 1														
Camera	Lens	Combined price of 28mm and 135mm lenses (\$)	Focal length (mm)	Type of lens fixing (see key)	Closest focus distance (cm)	Full-aperture light metering	Light-metering features (see key)	Shutter speed range and types of shutter (see key)	Flash synchronisation speed (sec)	Viewfinder facilities (see key)	Other facilities (see key)			
AUTOMATIC – you set the aperture														
ASAHI PENTAX K2	SMC Pentax	1.8	55	558	364	920	B	45	yes	BCx	8-1/1000V	1/125	M(S)s	BSbghlm
CHINON CEII Memotron	Auto Chinon	1.7	55	614	166	1,000	S	50	no(3)	Cmx	2-1/2000V	1/90	Ms	BSbdhlr
MINOLTA XE-1	MC Rokkor-PF	1.7	50	729	361	1,020	B	50	yes	Bx	4-1/1000V	1/90	MSas	BSbdfghi
NIKKORMAT EL	Nikkor	2	50	730	561	1,020	B	45	yes	Cm	4-1/1000V	1/125	MSs	BShlm
YASHICA Electro FX-1	Yashica ML	1.7	50	577	408	975	B	50	yes	Cx	2-1/1000H	1/60	Mas	BShlr
AUTOMATIC – you set the shutter speed														
CANON EF	Canon FD	1.8	50	671	453	1,010	B	60	yes	BCm	30-1/1000V	1/125	MSas	BSdhlm
KONICA Autoflex T3n	Hexanon AR	1.7	50	NA	NA	1,000	B	45	yes	BC	1-1/1000V	1/125	M(S)as	BSbdghlr
SEMI-AUTOMATIC – you set the shutter speed OR aperture and then align a needle														
ASAHI PENTAX KX	SMC Pentax	1.8	55	399	364	870	B	45	yes	BC	1-1/1000H	1/60	M(S)as	BSghlmr
CANON TX(2)	Canon FD	1.8	50	NA	453	960	B	60	yes	BC	1-1/500H	1/60	M	h
FUJICA ST801	EBC Fujinon	1.8	55	362	356	850	S	45	yes	BC	1-1/2000H	1/60	MSs	Shl
MAMIYA DSX 1000	Auto Sekor SX	1.8	55	385	281	930	S	45	yes	CD	1-1/1000H	1/60	M	Sh
MINOLTA SRT 303b	MC Rokkor-PF	1.7	50	538	361	960	B	50	yes	B	1-1/1000H	1/60	MSas	BSdfgh
MIRANDA REII(2)	Auto Miranda EC	1.8	50	NA	NA	880	B	45	yes	B	1-1/1000H	1/45	MSv	ehr
NIKKORMAT FT2	Nikkor	2	50	503	561	1,000	B	45	yes	Ce	1-1/1000V	1/125	MSs	Shm
OLYMPUS OM-1	F Zuiko Auto-S	1.8	50	507	455	700	B	45	yes	C	1-1/1000H	1/60	M(S)	MS(h)m
PETRI TTL	Petri CC Auto	1.8	55	280	320	890	S	60	no	C	1-1/1000H	1/60	M	Shr
PRAKTICA PLC2	Pentacon	1.8	50	NA	NA	840	S	33	yes	C	1-1/1000V	1/125	Mv	Shr
RICOH Singlex TLS (2)	Auto Rikenon	1.7	50	285	201	1,010	S	50	no	B	1-1/1000V	1/125	M	Sef

Table 2													
Camera	Standard lens	Convenience											
		Noise of shutter and mirror	Sharpness and contrast	Film changing and contrast	Winding and setting up	Changing and rewinding	Using viewfinder	Setting exposure	Changing and adjusting lens	Instructions			
											Meter reaction speed		
Automatic – you set the aperture													
ASAHI PENTAX K2				..		...	...		...				40
CHINON CEII Memotron			..	...		.	...	...	...				36
MINOLTA XE-1		...				..							43
NIKKORMAT EL		...	...	..			...		...		...		38
YASHICA Electro FX-1			...	..		.	...						38
Automatic – you set the shutter													
CANON EF			...	..			...						44
KONICA Autoflex T3n			...	..		...		...				...	39
Semi-Automatic													
ASAHI PENTAX KX			...	..									42
CANON TX (2)				..			...	...	..				39
FUJICA ST801			...			..	...	...	...	...			37
MAMIYA DSX 1000		...	...	..		.	...		..	..			32
MINOLTA SRT 303b			...	...		..							40
MIRANDA REII (2)		..	..	..	...	..	...		...	...		...	31
NIKKORMAT FT2		..		...			..		...	...	...		38
OLYMPUS OM-1			...			...	...	...	..	...	...		38
PETRI TTL			...	..		..	...	...	...	...	...		33
PRAKTIKA PLC2		.	..	..		.	..	...	..	...		...	27
RICOH Singlex TLS (2)		..	...	..	...	.	...	...	..	..		...	28
The more dots the better.													

Viewfinder of semi-automatic camera with poor information: the needle simply tells you that the exposure is correct.

Split-image focussing spot, in centre of viewfinder (criss-cross area is microprism around it). You focus by picking a vertical object the correct distance away – such as this tree – then turn focus control ring until upper and lower parts are lined up. At left they are not lined up, so tree is out of focus; at right, tree is in focus.



Viewfinder of automatic camera (you-set-the-shutter-speed type) with good information showing speed you have set and aperture that camera has selected.

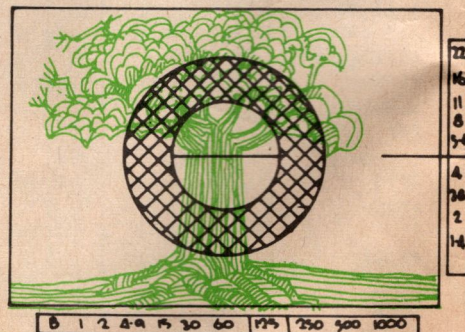


Table 3

OTHER SIMILAR SLR CAMERAS CURRENTLY AVAILABLE IN AUSTRALIA

Brand and model	Recommended retail price (\$)*	Lens (f)
ASAHI PENTAX K1000	306.50	2
ASAHI PENTAX KM	351	1.8
ASAHI PENTAX MX	480.90	1.7
ASAHI PENTAX ME	519.20	1.7
CANON AT-1	446	1.8
CANON AE-1	539	1.8
FUJICA ST605	249	2.2
FUJICA ST705	325	1.8
FUJICA ST901	550	1.8
KONICA TC	NA	1.7
MINOLTA SRT100b	327	2
MINOLTA SRT101b	447	1.7
MINOLTA XE5	599	1.7
MIRANDA DX111	NA	
MIRANDA TM	NA	
MIRANDA EE11	NA	
NIKKORMAT FT3	NA	2
NIKON EL-2	NA	2
NIKON FM	NA	2
OLYMPUS OM2	687.17	1.8
PETRI FA-1	360	1.7
PRAKTICA LB2	180.15	2.8
PRAKTICA Super TL2	189.15	2.8
PRAKTICA LTL3	210.15	2.8
PRAKTICA VLC2	286.15	1.8
RICOH Singlex II	285	2
YASHICA FX-2	387	1.9
YASHICA FR	472	1.9

*Prices include standard lens, chrome finish (when available) and case.

NA: not available

Table 4

TYPICAL STORE PRICES IN AUSTRALIA AND UNITED KINGDOM FOR CAMERAS TESTED

Brand and model	Australian price (\$)	United Kingdom price (£)
Automatic		
ASAHI PENTAX K2	469	258
CHINON CEII Memotron	491	181
MINOLTA XE-1	608	284
NIKKORMAT EL	700	270
YASHICA Electro FX-1	NA	215
CANON EF	319	240
KONICA Autoflex T3n	299	196
Semi-automatic		
ASAHI PENTAX KX	269	185
CANON TX	199	124
FUJICA ST801	279	154
MAMIYA DSX1000	240	125
MINOLTA SRT303b	480	198
MIRANDA REII	NA	150
NIKKORMAT FT2	472	183
OLYMPUS OM-1	370	200
PETRI TTL	NA	110
PRAKTICA PLC2	169	100
RICOH Singlex TLS	169	85

NA: not available

types were slightly different, and you couldn't use the lenses of one brand of camera on the body of another. The screw-type lens fixings all used the same thread, but weren't in practice always interchangeable (because if you used the wrong brand of lens, you might lose the full-aperture metering facility - see below).

Closest focus distance should be short if you want to take close-ups. PRAKTICA focused down to about a foot. However, for really close work, you can buy extension bellows or tubes to go between the camera and the lens.

Light-metering and focusing. On all the cameras, you could view the scene through a fully-opened lens - in this way seeing the scene as bright as possible, which makes focusing easier. As you pressed the release button, the camera automatically stopped down the lens to the correct aperture. All the cameras had a control which allowed you to look through the viewfinder with the camera set to the aperture it was going to use - in order to help you judge the depth of field (i.e. which parts of the scene would be in focus).

Most cameras had **full-aperture light metering**. This meant that the light-metering was done with the lens fully open, while you were focusing.

Three cameras did not have full-aperture light metering. With PETRI and RICOH, either before or after focusing, you had to move a control to stop the lens down while lining up the needle for correct exposure. CHINON did not have this drawback: as you pressed the release button half-way down, the

MORE ABOUT FEATURES, TESTS AND RATINGS

Weight. With an SLR camera, the extra lenses and other bits and pieces may weigh as much as or more than the camera itself. In general, the heaviest cameras were also the bulkiest. OLYMPUS was the lightest and smallest - weighing about a third less than the heaviest models. Its other lenses were also lighter than average.

Lens fixings were either of the *screw-type* or *bayonet-type* (like a light bulb). Bayonet-type fixings tend to make lens-changing quicker. All the bayonet

correct exposure was set automatically – you simply continued pressing the button to take the picture.

When buying extra lenses, or attachments for close-up work, it's worth finding out if full-aperture metering will be retained.

A typical subject is not of the same brightness all over, so the exposure used has to be a compromise. Most SLR exposure meters are designed to give extra emphasis to the light coming from the centre of the field of view (**centre weighting**), or from the lower part (**bottom weighting**), or from a combination of the two, in the hope that the most important part of your picture will be there. The key to Table 1 shows which of our cameras had which weighting. MAMIYA had a switch for changing from centre weighting to a spot in the foreground.

If the bottom part of the picture is weighted you may get a wrong exposure when taking vertical shots, because the weighting will then be on one side – a drawback that some of the instruction books said nothing about. Measurements, incidentally, showed that the meters on our samples of PETRI and RICOH weighted one side of the picture.

Shutters. The Table shows the possible shutter speed settings of the cameras. All except the CANON TX could take at 1/1000 second or faster. Some automatic cameras would not time for so long when used manually. But all the cameras had a 'B' setting – which allowed you as long an exposure as you wanted.

Other facilities

A **battery tester** (B) is necessary, particularly with automatic cameras, because a weak battery might mean inaccurate readings and spoiled pictures. Batteries will usually last about a year, but it is a good precaution to carry a spare. On KONICA testing the battery was awkward.

Two of the cameras could be used with a **motor drive or motor transport** (M), an expensive extra for moving on the film quickly and automatically.

If you use an automatic camera or a tripod with your eye away from the viewfinder, light coming in through the eyepiece can interfere with the exposure. A **blind** (b) to cover the eyepiece gets round this difficulty.

Nearly all cameras had a **hot shoe contact** (h) on top of the pentaprism housing for attaching the flash gun. This may be convenient, but it is not the best place to have the flash for good lighting – and a heavy flash gun could damage the camera if it was jogged. With all cameras, you could use a bracket screwed to the tripod socket and a cable connection.

Meter reaction speed. The exposure meters on most models gave the correct setting in half a second or less – quick enough, because it will usually take at least this long to aim and focus the camera. FUJICA was extremely fast; PRAKTICA took up to 1½ seconds – which might be a problem.

Exposure accuracy. The accuracy of the shutter speeds was measured, and the exposure meters were tested to see how well they coped with different situations – such as a dark object against a bright background.

Noise. In some situations – for example, when taking pictures of wild life, or (probably against the rules) in a theatre – the clicking of a camera can be distracting. Ratings are in Table 2: most cameras were rather noisy.

Lens quality

Sharpness and contrast. All the cameras tested would produce acceptably sharp pictures under most conditions with their standard 50 mm or 55 mm focal length lenses. It is only on the relatively rare occasions when you need to use the maximum aperture of the lens, or apertures smaller than about f11, that problems can arise. At maximum aperture, you might notice some softening of the definition with MIRANDA and RICOH lenses. Cameras with a five dot rating were very sharp even at maximum aperture, and even better at f5.6.

Internal reflections. If you take a picture which includes bright spots – for example, street lights, or the sun – the picture can be spoilt by reflections from the many glass surfaces that make up the lens, or from any bright surfaces in the lens supports. There were big differences between the NIKKOR lenses – excellent in this respect – and several of the others, which were very poor. One of the PENTAX lenses was better than the other.

Convenience

The Table gives ratings for ease and convenience of use, under the headings listed below. But handling is partly a matter of personal taste so, if you can, try several cameras in the shop before finally making up your mind.

Film changing and setting up: loading and unloading a film, changing batteries, setting the frame counter, setting the film speed.

Winding and rewinding: advancing the film after each picture, and rewinding into the cassette at the end of the film.

Using the viewfinder: how clear and bright it was (all were quite good), and the amount of information shown in it.

Setting the exposure: using the camera manually and automatically or semi-automatically.

Changing and adjusting the lens: this rating puts most emphasis on ease of changing lenses, focusing and of adjusting the aperture – but also includes fitting a lens hood, and ease of viewing the depth of field.

Instructions: these were rated for their completeness and clarity. Most were good.

"COMPREHENSIVE" CAR INSURANCE

There are about seven million motor vehicles registered in Australia — and about four and a half million of them are cars. The repair bill for those of them that are insured amounted to approximately \$327 million in 1974-1975.

Who pays? The car owners, of course, by means of their insurance premiums, and they also pay an amount which goes to pay for the insurance companies' running expenses and profits. But exactly what does your car insurance cover you for, and how much can you expect to get when you make a claim?

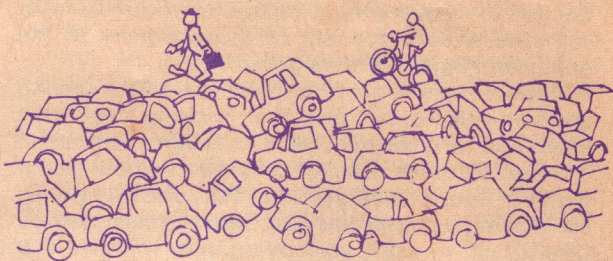
Types of policy

In all States and Territories there is a mandatory third party (bodily injury) insurance, which you usually pay at the same time that you register your car. This policy covers legal liability to persons in the insured car, other than the driver, and to the driver and passengers in any other vehicle involved in an accident with the insured car, and pedestrians and other persons outside the car who may be injured or killed as a result of an accident in which it is involved. There is no limit to the insurance company's liability under a third party (bodily injury) policy — you have full protection for your liability at law, whether the amount is arrived at by negotiation or decided by a court.

Of the optional types of car insurance available — that is, those you pay extra for on top of the legally required third party (bodily injury) cover — there are two basic categories. One is what is known as a comprehensive policy, which covers basically damage to your own vehicle and any other property you may come into collision with (if you are at fault), and the other is third party property damage policy, which covers only damage to any other vehicle or property you may collide with as a result of your own fault, but does not cover damage to your own car.

The comprehensive type of policy is by far the most popular, and also the most expensive. Third party property damage policies are mainly used by the owners of older vehicles of lower value, which they reckon are not worth the cost of insuring, but who wish to cover themselves in case they run into an expensive new car, or other property.

Since the most popular policy is the, so called comprehensive policy, this is the one dealt with in this article. ACA wrote to 24 insurance companies operating in Australia and obtained copies of their comprehensive motor vehicle policy from 18 of them.



The cover you get

Each company has its standard comprehensive policy and in this part of the report we tell you what it does — and does not — cover you for.

The policy is generally divided into seven sections in a typical policy:

Section 1 — covers loss or damage to your car and its accessories and spare parts. It also covers the reasonable cost of protecting your damaged car and removing it to the nearest repairers. It does not cover you for ordinary wear and tear to your car, nor for breakages or breakdowns. Depreciation is not, of course, covered, nor, usually, are any expenses you incur while your car is being repaired — like hiring another car (although some policies cover this cost for a specified period).

Section 2 — in the event of death or bodily injury to another person or damage to his property, the policy covers the expenses and cost of

- claims against you as a result of an accident caused by you driving your car
- claims against someone else who was driving your car with your permission (provided that he was a licensed driver, had not been refused insurance by any company, and was not indemnified under any other policy)
- claims against a passenger in your car if he causes an accident.

It does not cover you for damage to the property of any relative or friend who ordinarily resides with you, or in respect of death or bodily injury to such a person, or a person who was working for you at the time of the accident.

It does not cover you for any liability that you are required to insure against by law. This means that, since you are required by law to take out a third party (bodily injury) policy if you own a registered car, the policy does not cover any risk which you should have covered by taking out such a policy. Therefore, the only injury contingency covered is where you injure someone while driving an unregistered vehicle (and one which is not required to be registered) on private property.

Some companies limit their liability (usually to \$200 000) in respect of any one accident or event.

Section 3 – covers legal costs that you may incur with the written consent of the company in the defence of legal actions against you.

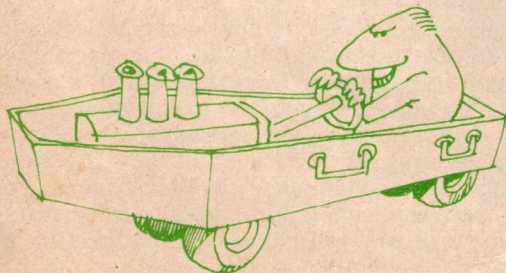
Section 4 – gives protection while you are driving another vehicle, but only if it is being used as a substitute for your own car. Protection is limited to damage to other vehicles or property, liability for death or injury, and legal costs. For example, if your car is being repaired and your friend offers to let you take his car to work, your own policy will give you protection for damage to any property or injury to any person, and legal costs, in an accident caused by you while driving that car, even if your friend's car is uninsured.

Section 5 – allows the insurance company to represent you and any other person protected under the policy at any inquest or other official inquiry and to undertake your defence in any magistrate's court, provided that it is in connection with an accident that has given or may give rise to a claim under your policy.

Section 6 – provides protection for your employer in the event of an accident giving rise to a claim against him. For example, if you use your car when working and are involved in an accident, the owner of the other vehicle may elect to sue your employer instead of or as well as you to recover his damages. If he succeeds, your employer will be protected by your policy.

Section 7 – provides for the reimbursement of medical and hospital expenses up to a specified limit which you have paid in connection with bodily injuries sustained by passengers in your car at the time of the accident. The limit is usually \$100, but it will not be paid if the passenger is entitled to benefits under any workers' compensation scheme.

Some policies have additional sections which extend to cover such things as insurance of the car while it is used in New Zealand for up to three months, and damage to personal effects, clothing or luggage by reason of a fire or accident to the car, with a maximum for any one article and a total maximum for any one year. Most also cover damage to any trailer attached to the car, but caravans need separate insurance.



Some companies also include a limited amount of personal accident insurance in their policy. This is an extremely important aspect of insurance cover as you, if you are driving the car and are at fault, are not covered for any loss or injury sustained by you as a result of the accident under either your third party (bodily injury) policy, or under the normal comprehensive policy. Even those policies which do give some cover give very little (usually \$2000 if you are killed, sometimes doubling the amount if you were wearing an approved seat belt at the time) to compensate for death or serious or permanent disablement.

The cover you don't get

First and foremost, in most policies you are not covered for any injury or damage (except damage to your car) sustained by you if you are the driver and involved in an accident caused by your own fault or where no one was at fault. For example, if you are driving your car and simply run off the road and hit a tree, you are not covered for the cost of your own medical treatment and cannot get compensation for any resulting disablement.

You are not covered for any loss or damage caused or incurred while your car is engaged in any race or speed or reliability trials, or if it is carrying a load in excess of that for which it was constructed ("load" includes people). Nor are you covered if your car is being used to transport people or goods for reward, or is being driven by an unlicensed driver with your authority.

But the most far reaching exclusion is that which avoids liability while the car is being driven by a person under the influence of alcohol or drugs, with an exception where it is driven by such a person without your knowledge or consent. This means that if you are at a party and you allow an inebriated friend to drive your car home (or drive it yourself while inebriated, for that matter) and he is involved in an accident, you are not covered. But if your car is used by your inebriated friend without your knowledge or consent (and generally this would need to be substantiated by a report to the police) you will be covered for any loss or damage sustained.

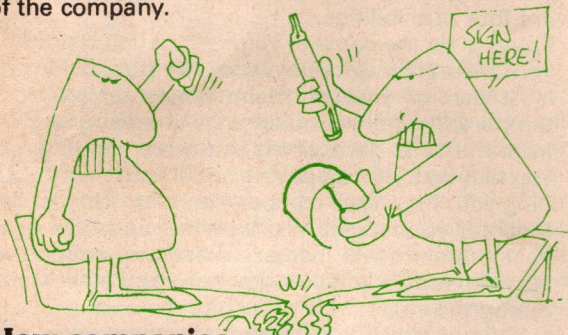
In some States this clause has been modified by legislation. In Tasmania an insurance company is not permitted to invoke this clause in order to avoid paying out under an insurance policy, provided that the driver is not intoxicated to the extent of being incapable of controlling the vehicle; while in New South Wales the insurance company cannot rely on a conviction for drunken driving as evidence of drunkenness, although it may give evidence that the driver had in fact been drinking.

You are generally not covered if your car is involved in an accident while it is in an unsafe or

unroadworthy condition. However, if you have had your car serviced regularly and have taken reasonable care to ensure that it is in a safe condition, you are not liable for any mechanical defect which you could not have known about.

The policy also usually stipulates certain conditions which must be complied with in order to claim under it. You must give notice in writing of every accident involving personal injury, property damage or loss as soon as possible after the occurrence, regardless of whether your car has been damaged and whether or not you wish to make a claim, or whether you consider yourself wholly or partly to blame. You must also ensure that you lodge any claim you wish to make within the time stipulated by the company.

You must not make any admission of liability or any offer or promise to pay for the damage without the consent of the company, nor may you authorise repair of the damaged vehicle without the consent of the company.



How companies decide what to charge you

How much premium a company will charge you will depend on a combination of many factors, but the basic things taken into consideration are:

- *the make and model of your car* – many companies have printed lists or cars which sort them into groups based on the cost of repairs and parts, and the method of construction.
- *where the car is garaged* – the premium will vary depending on whether the car is primarily used in the metropolitan area or the country
- *claims history of the driver or drivers* – drivers are usually insured at first instance on a basic level if their accident history is considered to be satisfactory. From the level, most companies offer a no claim bonus when you renew the policy if you have made no claims during the preceding year of insurance. If you continue to make no claims on the policy in succeeding years, many companies will discount the cost of your premium by up to 65 per cent after a number of years of claim-free insurance.

If you change insurance companies, some companies will take a no claim bonus granted by your prior insurer into account when determining your premium

- *age of the driver* – if you're under 25 you will usually find yourself either paying a higher premium or an "age excess" (see under *excess*) or in some cases you may have to do both. Some companies apply a "new driver" excess, regardless of age, on anyone who has been driving for less than two years

- *purpose for which the car is used* – you will usually have to pay a higher premium if you want to use the car in connection with your employer's business, or if you want other people to use it in connection with your own business

- *whether your vehicle is subject to a hire purchase (or consumer mortgage) agreement* – some companies increase the premium by as much as 50 per cent if you have financed payment of your car through a finance company. It is not usual to increase the premium if you have obtained a personal loan

- *excess* – under many policies you are required to meet the first \$50 to \$100 of any claim you make – this is called an excess. Many companies allow you to delete this excess by payment of additional premium. If you are under 25 you can expect to be subject to an age excess which is usually irremovable. Some companies have a sliding excess which will increase or decrease according to the number of claims you make and the size of the claims made

- *whether you have ever been refused insurance* – some companies will refuse to sell you insurance if they find out that another company has ever refused to insure you, but most will just take it into account when deciding the premium to charge you.

All this information is disclosed by you when you fill out the proposal form and it is used to establish the premium to charge you. It is important that you reveal all your driving offences, no matter how old or how trivial they are. If you give false information or withhold material information, you may find that when you make a claim the insurance company will be able to totally avoid liability under the policy.

No claim bonus or no blame bonus?

Strictly speaking, a no claim bonus is just what it says it is – a bonus given to you if no claim is made on the policy, regardless of whether the damage is caused by your fault or someone else's.

Most insurers operate amongst themselves what is known as a knock-for-knock agreement. Instead of trying to prove who is responsible for an accident, they each pay for their own client's repair costs. The idea is that, by the law of averages, a company will come out all square in the end and the expenses of deciding which driver is to blame will be saved. However, since a company is therefore not too concerned about establishing blame (or innocence), there is a tendency for the innocent driver to lose his no claim bonus.

Because of these agreements, when you are involved in an accident which wasn't your fault (or not totally your fault), you may either claim for the damage on your own insurance policy or claim the cost of your damages from the other person.

If you make a claim on your own policy, as soon as the claim is lodged you usually lose your no claim bonus (or part of it). Some companies, however, have an internal policy whereby, if you are not at fault and they are able to recover the cost of that damage (either from the owner of the other vehicle or the company with whom he was insured) they will reinstate your no claim bonus when they recover this amount.

If you claim direct against the other person you will retain your no claim bonus, but you may experience long delays before the car is repaired, as you may have to wait for his insurance company to give authority for the repairs, which they will not do until they are satisfied that their client was at fault. If they believe that, while their client was partly at fault, nevertheless you were guilty of contributory negligence (in other words, you were in some measure at fault in the accident), they may pay only part of the cost of the damage.

With respect to any excess payable by you, if you are not to blame your insurer should take steps to have the other insurance company (or the other owner) refund this to you, but if any dispute arises, normally that part is handed over to you to pursue as best you can.

How much of your no claim bonus do you lose if you make a claim – all of it, or just part of it? Again, this is a matter of the internal policy of the company. Some companies take away the whole of the bonus and you start again from scratch, even if you had a maximum bonus. In many cases, especially for minor damage, it pays you not to claim the cover you are insured for, as it is cheaper to pay for the repairs yourself than to pay the higher premium that would become payable because of the loss of your no claim bonus.

Just what the insurance company's policy is regarding no claim bonuses – whether you lose it as soon as you make a claim, regardless of blame, and just how much of it you lose – should be ascertained before you take out a policy so that if you have an accident you are in a better position to decide whether or not it is worthwhile making a claim.

When and how to claim

Whether you intend to claim from your insurance company or not, and even if you have not yourself suffered any damage but have damaged another vehicle or other property, it's a condition of all policies that you notify your insurance company that you have been involved in an accident as soon as possible after the event. You will then be sent an accident report form to fill in.

When you complete this form, be completely truthful. If you enter incorrect or misleading information your insurance company will have the right to refuse your claim. If you do not intend to claim from your own insurance company, make it clear on the form that you do not intend to claim at this stage, and thereby reserve the right to change your mind (for example, if it turns out that the person who ran into you is not insured and has no money).

What you do next depends on the situation. There are four possibilities:

- *paying for the damage yourself* – if you claim from your insurance company, you will probably lose at least part of your no claim bonus (at best only temporarily until your insurance company recovers from the other party or his insurance company), so you may be better off paying out of your own pocket. Ring your insurance company and find out just how much of your bonus you will lose and how much your premium will increase (which, of course, will also depend on whether you have any other claims during the year)
- *claiming from your insurance company* – with most companies, you take the vehicle to the repairer of your choice and get an estimate, then send this estimate to your insurance company straight away – at the same time as the accident report form, if possible. Don't authorise the garage to start repairs until the insurance company has accepted the estimate – if you do, the company may refuse to pay up. Read your policy carefully to make sure this procedure applies to you
- *claiming from the other party* – we recommend that you claim in this way only if the other driver has admitted full responsibility or if the responsibility for the accident is indisputably and totally his. If you claim this way, the first thing to do is get an estimate for the cost of repairs to your car (or several estimates, if possible) and write to the other person saying that you hold him responsible for the collision and enclosing a copy of the estimate for repairs and outlining any other claims (for example, for personal injury) which you intend to make. Tell him where your car is and that if he or his insurance company wants to inspect the damage they may do so within ten days – after which repairs will begin. If he passes the matter on to his insurance company they may write to you accepting the estimate as



reasonable, but not accepting liability. You will then have to either go ahead and have the repairs done, without any guarantee that the insurance company will pay up, or wait until they are satisfied that their insured is, in fact, liable. If the other person refuses to pass the matter on to his insurance company or is not insured and refuses to pay himself, you will have to take your case to court if you are to have any prospect of recovering

- *the other person claims against you* – if you do not consider that the accident was your fault, or totally your fault, then tell the person claiming that you will pay nothing. If you feel that it was your fault, or partly your fault, decide whether to pay for the damage yourself or claim on your policy. If you intend to pay out of your own pocket, make sure you know how much it will cost before you agree to pay and do not at any time admit liability. On all letters write **WITHOUT PREJUDICE** clearly at the top and before you settle the claim get a written acceptance of your offer from the other party involved which is stated to be “in full and final settlement”

How much should you insure for?

The majority of insurance companies use one of two methods of ascertaining the amount which they will pay you if your car is “written off”. Some have an “agreed value” clause in the policy, whereby you and the company come to an agreement at the time you take out or renew the policy as to what your car is worth, taking into account its make and model, the distance it has travelled and the purposes it is used for. The amount is adjusted from time to time as the car appreciates or depreciates in value.

Other companies will insure you for whatever amount you nominate, but state in the policy that they will not pay you more than “market value” if the car is destroyed or “written off”. So there is no point in insuring your car for more than you would get for it if you sold it.

An agreed value policy will usually not apply to cars over ten years old and these can generally only be insured for market value. When deciding how much to insure for, don't forget to include the value

of any accessories you have fitted to the car, such as air conditioning, and to review the amount you are insuring for each year to allow for appreciation or depreciation in value.

What our subscribers told us

We asked many of our subscribers who had made a claim on a comprehensive car insurance policy within the last two years if they would like to fill in a questionnaire on their experience. Comments received varied from those who stated that they were pleased with the way their company had handled their claim and the speed with which it had been settled, to those who were highly dissatisfied with the attitude adopted by their insurance company and felt that they had been treated unfairly.

The majority had claimed on their own insurance policy even if they were not in fact at fault, and the majority of claims were paid, although the time factor varied considerably. The majority of people lost all or part of their no claim bonus, although most stated that they were aware that this would happen if they made a claim.

How much does it cost?

We rang 14 insurance companies for quotes on the premium to insure a family sedan and a smaller, two-door car. On the first example, quotes ranged \$205 to \$357; on the second example, from \$195 to \$437. Some companies showed a marked reluctance to give a quotation over the telephone, but our advice is to persevere and shop around until you find a company which combines a low premium with a reasonable approach to no claim bonuses and claims.

Conclusions

With the exception of a few companies who endeavour to simplify the wording on their insurance policy (with varying degrees of success), the wording of most policies makes it hard to discover just what is and what is not covered. You have to look at each section separately and then read it subject to the general exceptions to the policy and also look at the conditions, at the Schedule to the policy and at any endorsements. You must also remember what you agreed to when you signed the proposal form.

ACA believes that, before taking out a comprehensive motor vehicle insurance policy, consumers should, as far as possible, find out from insurance companies just what will happen when they make a claim. By setting up various hypothetical circumstances, find out just how your no claim bonus will be affected and whether the company will endeavour to recover your excess if you are not at fault. Then shop around until you find a company which combines a low premium with a reasonable attitude to claims.

Sewing machines – corrections

In the test report on sewing machines in **CHOICE**, June, 1977, the Summary of the PFAFF 1222E on page 215 said, incorrectly, that it is made in Canada. It is made in West Germany, as stated in the Market Survey on page 200.

The guarantee on LEMAIR 703 covers one year's free service, besides covering the machine head for life and the motor, electrical and foot components for one year.

Car service manuals

With the increasing labour costs associated with getting a car serviced in the local garage or dealership, many motorists are doing their own mechanical repairs and routine maintenance. Many of these new 'do-it-yourself' mechanics will not know a big end from the front end and will seek confidence and instruction from a car service manual.

We found that some car manufacturers do not make service manuals available to the public. In these cases, independent publishers have produced "unofficial" manuals to fill the gap, and we bought some of these.

ACA commissioned an experienced automotive consultant to review a number of car service manuals. We purchased for review examples of books provided by both the car manufacturers and independent publishers.

TABLE		What we bought	
Brand and model of vehicle	Manufacturer's manual (\$)	Independent publisher (\$)	
CHRYSLER Galant	19.00		
DATSUN 180B	12.50	8.00	
FORD Escort	15.00		
HOLDEN HQ	23.40		
JAGUAR XJ6 Series 1	30.00		
LEYLAND Mini	8.95*		
RENAULT 12		7.95	
TOYOTA Corolla	12.30		
VOLVO 240 Series	35.75		
VOLKSWAGEN Beetle		7.50	

*Published by Leyland Motor Corporation of Australia Ltd., but available only through Kirby Book Co. Pty. Ltd.

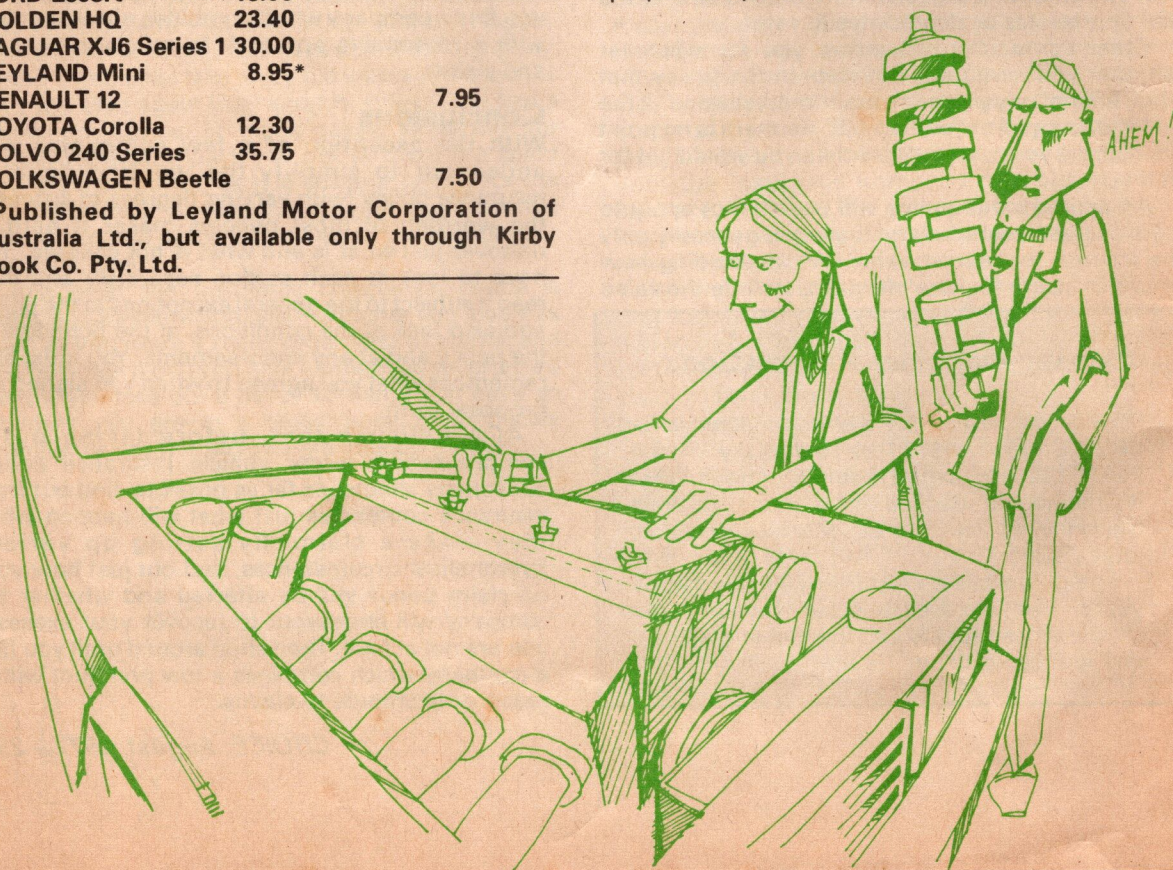
Although often sold to 'do-it-yourself' owners, these manuals are mainly intended for the professional mechanic. Most of those reviewed have major defects from the point of view of the enthusiastic but inexperienced home mechanic.

Workshop manuals would be more useful if lists of types and sizes of hand tools required for each job were included before the appropriate procedure is described. Some of the manuals are easier to use than others as they include data in the text where it is required, which saves constantly turning pages to find the often encyclopaedic general specifications located at the back or front of the manual. This is likely to be done with greasy hands in the middle of the job, and manuals (particularly those printed on matt paper) quickly become soiled.

Workshop conditions are rarely good for reading small print, a point which is frequently overlooked by publishers when laying out manuals.

Of those reviewed, the DATSUN manufacturer's manual and the HOLDEN and TOYOTA manuals were the only ones which did not appear to be arranged for publishing convenience and economy rather than for easy reading and use.

In general, the manuals prepared by independent publishers had more shortcomings than those prepared by car manufacturers themselves. The



Scientific Publications manual on the Datsun 180B was mainly a list of 'what to do' rather than instructions 'how to do it'. We consider that manuals like this are of only marginal help to the inexperienced mechanic at whom they appear to be aimed.

Owners of cars manufactured since 1st July, 1976, are warned that the complex Exhaust Emission Control Equipment must be kept in good order by a competent person, and there are fines for non-compliance. This work in any case requires very expensive equipment which the average owner will not possess nor wish to buy.

Many of the manuals contain over-simplified instructions – for example, from the CHRYSLER Galant trouble shooting guide: "Radiator water leaks: Remedy – correct or replace", or from the DATSUN 180B manual: "Insert two blocks of wood of suitable dimensions".

Individual summaries

CHRYSLER Galant (Chrysler Australia Ltd.) two books, \$19.00 492pp. A comprehensive manual, concisely presented but many of the illustrations are printed too small to show the detail closely. Suitable for qualified service personnel, but requires experience and good mechanical knowledge for use at home.

DATSUN 180B (Model 610 Series) (Nissan Motor Co., Ltd.) \$12.50 500 pp. Has many photographs and drawings which are helpful but often too small for clarity. Very good special tool guide and specifications/data list at the end of each section. Very comprehensive for both the amateur and the professional.

DATSUN 180B (610 Series) (Scientific Publications Pty. Ltd.) \$8.00 224 pp. Lists "what-to-do" but is inadequate for the home mechanic who wants also to know "how to do it". The index to individual procedures given at the back of the book is most helpful for quick reference.

FORD Escort (1970-1975) (Ford Motor Company of Australia Ltd.) \$15.00 743 pp. A comprehensive manual with complete information. Written for experienced mechanics, but can be used by home mechanics with a knowledge of general maintenance techniques. The main drawback for the home mechanic is the lack of trouble shooting procedures.

HQ HOLDEN (General Motors-Holden's Sales Pty. Ltd.) Five books \$23.40 951 pp. The foreword states that the manual was "Designed as a reference book for the competent mechanic and a step by step procedure for the less experienced." We think it achieves the intention well, except that the photography is poor.

JAGUAR XJ6 Series 1 (Jaguar Cars British Leyland UK Ltd.) \$30.00 574 pp. A comprehensive loose leaf single volume which relies on description

supplemented by illustration of procedures. Lacks some of the detail which would assist owner mechanics, but appropriate for the trained mechanic.

LEYLAND Mini All models (Leyland Motor Corporation of Australia Ltd.) \$8.95 184 pp, part number TP838B. This manual would be difficult to use as the descriptions of procedures are brief and poorly arranged. It is a useful reference for an experienced mechanic, familiar with the vehicle. The manual provides a starting point for the home mechanic, but lacks detail. A comprehensive manual (Part number TP832) with more detail is also available.

RENAULT 12 (Intereurope Ltd.) \$7.95 140 pp. A brief, concise treatment useful for the experienced home mechanic as a reference. A more comprehensive treatment is required for the inexperienced. The model dates are not necessarily applicable in Australia.

TOYOTA Corolla (Toyota Motor Sales Co. Ltd.) Three books \$12.30 488 pp. A very complete and easily read manual. Comprehensive enough for the service mechanic, but readily understood by the home mechanic. Lack of fault finding charts will disappoint the inexperienced. Every major assembly is shown fully exploded, accompanied by a detailed list of components, and bolt torques are indicated adjacent to the bolts. There are many notes of warning and caution included in the procedures.

VOLVO 240 Series 1975 (AB Volvo) Three books \$35.75 718 pp. This manual is comprehensive but home mechanics may find some of the procedures lacking in detail and difficult to follow. It is mainly intended for experienced service mechanics, but the fault finding charts are excellent.

VOLKSWAGEN Beetle (Intereurope Ltd.) \$7.50 139 pp. This manual has a light coverage of the subject, although the small print and illustrations pack a lot of useful information into an attractive book. Many models are covered, but the model dates are irrelevant to Australia. The manual intends to be brief and simple but in achieving this it makes some of the procedures appear deceptively simple and the inexperienced mechanic should proceed with caution. Illustrations are often separated from the related text.

Conclusions

When buying a car service manual do not be over-impressed by attractive layout; look for the detail that you need. We think you are more likely to find it (although at a higher price) in the manufacturer's own manual than in an independent publisher's manual. All companies which produce car service manuals should give more thought to the manner and the conditions in which they will be used.

Coping with inflation

- Bulk buying

The pressure to buy more cheaply can be raised by a lag between increases in income and rises in prices. One of the ways some people have tried to reduce their living costs is by buying in bulk - either on their own, or in association with a group of people. We would like to know about the experience of subscribers who have either:

- A formed a private bulk buying group with other consumers (e.g. friends, neighbours, relatives), and/or
- B bulk buy individually just for their own household, and/or
- C belong to a co-op store where they can bulk buy.

We would like to know:

A People who are in a private bulk buying group

- 1 How long has your household been involved in a private bulk buying group?
- 2 How many households are in the group?
- 3 Please tell us, with as much detail as possible, how the group is organized, e.g., how the buying is rostered, how and where the food is packed into individual orders after it is bought, how the money is handled, and anything else you can think of about the organization of the bulk buying group.
- 4 How often is the bulk shopping done (e.g., weekly, fortnightly)?
- 5 What items are bought in bulk (e.g., meat, fruit and vegetables, canned foods, packet foods, kerosene, spices, frozen foods)?
- 6 Are there any items which you have found by experience to be unsuited to bulk buying? (Please list items and give reasons.)
- 7 How much does your household spend on each bulk shopping trip, and how much (approximately) do you save per week by shopping this way?
- 8 Would you recommend to other consumers that they should form a private bulk buying group?
- 9 Are there any problems or disadvantages to this kind of bulk buying? Any pitfalls to avoid?
- 10 If you have any advice or suggestions for other people on how to start a bulk buying group, please tell us.

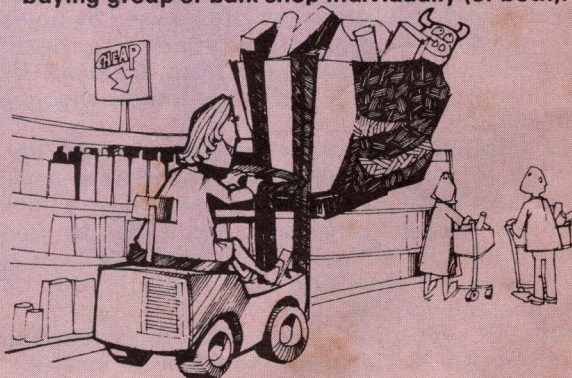
- 11 How many people are there altogether in your household, and, of these, how many are children aged 15 or younger?
- 12 Which city/town/suburb and State do you live in?

B People who bulk buy individually just for their own household

- 1 How long has your household been buying in bulk?
- 2 How often does your household shop in bulk (e.g., weekly, fortnightly)?
- 3 What items do you buy in bulk (e.g., meat, fruit and vegetables, canned foods, packet foods, kerosene, spices, frozen foods)?
- 4 Are there any items that you have found by experience to be unsuited to bulk buying? (Please list items and give reasons.)
- 5 How much do you spend on bulk buying and how much (approximately) do you save per week by shopping this way?
- 6 Are there any problems or disadvantages to individual bulk buying? Any pitfalls to avoid?
- 7 If you have any advice or suggestions for other people on how to do their own bulk buying please tell us.
- 8 How many people are there altogether in your household, and, of these, how many are children aged 15 or younger?
- 9 Which city/town/suburb and State do you live in?

C People who belong to a co-op store where they can bulk buy

Please answer Part A or Part B (or both) according to whether you belong to a private buying group or bulk shop individually (or both).



Letter to the editor

ACA received from a subscriber a copy of letters she wrote to the Health Departments of Victoria and South Australia concerning an alarming experience with fumes from a chipboard cupboard at her place of work, which read (in part):

"From the time the cupboard was completed I was aware of a reaction – stinging eyes, sinus trouble, etc. – which had nuisance value but little more. My time in the office was intermittent at that stage, and I did not regard the effects as serious, despite that I appeared to be becoming increasingly tired.

"Then, recently I spent several consecutive days in the office and was aware of a feeling of unnatural exhaustion. After four days of exposure to the fumes, I became extremely weak and was in a state of almost of semiconsciousness. For several days I did little more than sleep, then the effects gradually began to wear off. The cause is believed to be a toxic effect from the fumes of the glue used in the chipboard.

"In an effort to overcome the problem the carpenter contacted the distributor and was advised to seal all surfaces with varnish. However, it soon became obvious that this was not sufficient to effectively eliminate the fumes. The cupboard has now been removed.

"The carpenter has again spoken with the distributor, also the C.S.I.R.O. and it appears that there is awareness of the possibility of health hazard, but the view is that people's livelihood is at risk...and that the manufacturers of such boards are reputable companies who wouldn't knowingly market a board that could be dangerous."

The following is part of ACA's reply:

"We understand that the problem is caused by formaldehyde from the urea-formaldehyde resin used in the manufacture of chipboard. The amount of free material may vary with the brand of resin used and is released slowly. Unfortunately, the appropriate Australian Standard does not contain any mention of free formaldehyde.

"Although varnishing the chipboard can slow down the release of the fumes, it cannot be eliminated completely."

Our subscriber's experience may be compared with that of one of a senior member of ACA's staff who, while using a soldering torch recently inside a chipboard kitchen cupboard, touched the surface with the flame and had to leave the cupboard quickly to avoid the pungent fumes which were immediately given off.

ACA has forwarded its information to the Standards Association of Australia. We feel that all consumers should be aware of the risk of discomfort – if not of a health hazard – from the use of chipboard in domestic constructions, especially if it is not fully sealed with a coating.

Jotting

Self-converging TV tubes

You may remember that in our report on 63 cm colour televisions last December, five of the best sets tested had been superseded before CHOICE was published. Among these was the PHILIPS KD655, our recommended best buy.

If, like us, you have been wondering whether these new models are necessarily as good as or better than the ones they have superseded, the results of a short test we carried out recently should interest you.

Complete testing of the new models was not practical, so, to give us an idea of the sort of improvement to expect, we decided to look at one particular feature which appeared to herald a significant change in design – the so-called 'self converging tube'. It is claimed that this gives you a more stable, 'knock resistant' picture which is less likely to be thrown out of alignment by movement of the set.

We bought the new PHILIPS KJ656, which had superseded the original test PHILIPS. Each set was adjusted to give as good a convergence performance as possible, and then subjected to a continuous sequence of 'bumps', one 'bump' being a 10 mm drop every 10 seconds. During testing, each set was connected up to equipment in order to monitor changes in its convergence characteristics.

The result was that, after 24 000 bumps – a severe test by any standards – there was no perceptible change in the convergence performance of either set. The only consequence of testing was a sound output failure on the KJ656 due to a poorly soldered joint on the sound output transformer.

Two things follow from this test: PHILIPS sets appear to be very sturdily constructed, and, in the case of this brand and model, the set with the self converging tube doesn't seem to offer any obvious advantages over the one without.

Without doing further extensive testing, we can't say what, if any, advantages the self converging tube has, or what the results of a similar test would be with different brands. What we can say is that, on the basis of our test, 'new' isn't necessarily synonymous with 'better'. One possible drawback with the self converging tube could be replacement cost; both the tube and the coil assembly are involved and you will pay more for this, though the installation and setting-up costs should be less.

A NOTE ON RENEWALS

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